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(19) (11) Publication number: **63248239 A**

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PATENT ABSTRACTS OF JAPAN

(21) Application number: **62082659**

(22) Application date: **03.04.87**

(51) Intl. Cl.: **H04J 7/00**

(30) Priority:

(43) Date of application publication: **14.10.88**

(84) Designated contracting states:

(71) Applicant: **RICOH CO LTD**

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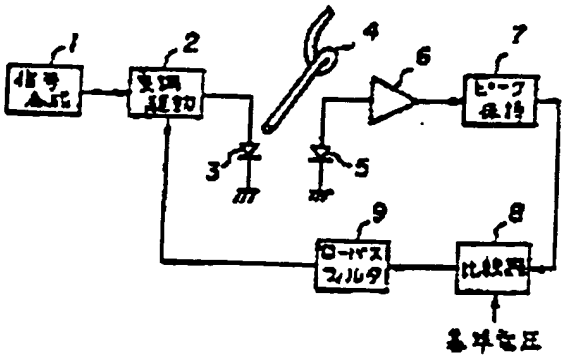
(74) Representative:

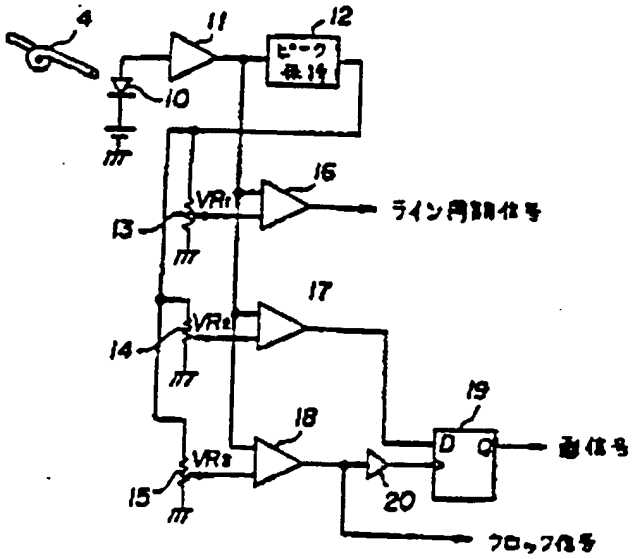
(54) OPTICAL TRANSMITTER

(57) Abstract:

PURPOSE: To attain multiplex transmission for a binary signal with an inexpensive equipment by applying multiplexing in a way that a binary signal is a maximum value of a multi-value signal, using a signal maximizing the multi-value signal as a reference signal to control the output of light source and binarizing the voltage division of the peak value of the multi- value signal at the reception side as a threshold voltage.

CONSTITUTION: A signal synthesis circuit 1 applies multiplex through multileveling a line synchronizing signal in the order of a picture signal and a clock signal. A modulation drive circuit 2 uses the multi-





value signal to apply modulation drive to a light source 3 to output an optical signal. Part of the optical output is subjected to photoelectric conversion by a photodetector 5. This signal is fed back to the circuit 2 via a peak hold circuit 7, a comparator 8 and an LPF 9 to the circuit 2 so as to make the maximum value of the output of the light source 3 equal to a reference signal voltage of the comparator 8. A receiver holds the maximum value of the input signal by the peak hold circuit 12, that is, holds the voltage of the line synchronizing signal. Voltage division circuits 13□15 form reference voltages VR1□VR3 from the output signal of the circuit 12, comparators 16□18 use the reference voltage to binarize the output of the amplifier 11 to obtain said 3 signals. A DFF 19 obtains the original picture signal from the clock signal by the comparator 18 through the use of the picture signal from the comparator 17.